Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In The Matter Of	)	
Amendment of Part 22 of the Commission's Rules To Benefit the Consumers of Air-Ground Telecommunications Services	)	WT Docket No. 03-103
Biennial Regulatory Review—Amendment of Parts 1, 22, and 90 of the Commission's Rules	)	

To: The Commission

REPLY COMMENTS OF QUALCOMM INCORPORATED

QUALCOMM Incorporated ("QUALCOMM"), by its attorneys, hereby submits its Reply Comments in the above-captioned proceeding initiated by the Commission in its Notice of Proposed Rule Making, FCC 03-95, released April 28, 2003, (NPRM"), to consider changes to the Commission's rules to improve the air-ground telecommunications services available to the public on commercial airplanes. See NPRM at ¶1.

I. Introduction

In these Reply Comments, QUALCOMM makes two overriding points. First, to enable the provision of state-of-the art high speed wireless broadband data and voice service by multiple providers with sufficient capacity to meet present demand and expected future growth in subscribers, the Commission should allocate at least 60 MHz of dedicated, paired spectrum below 6 GHz for air-ground service. Such a new allocation is the only means to fulfill the Commission's fundamental objective to further the public interest through the initiation of next generation air-ground service with sufficient capacity to meet present demand and future growth

and at affordable prices for consumers.

Second, to protect terrestrial cellular and PCS networks from harmful interference, the Commission should retain Section 22.925, the ban on the airborne use of cellular phones, adopt a similar rule prohibiting the airborne use of PCS phones, and review its rules to ensure that all personal electronic devices brought on airplanes do not cause harmful interference to terrestrial wireless networks operating on licensed spectrum. There is no evidence or empirical data in the record of this proceeding to support repeal of Section 22.925. Mere speculation is not a sufficient basis for the Commission to repeal this important rule, which protects millions of Americans who use their cellular phones each day as an essential tool for communication from harmful interference and which safeguards the investment of billions of dollars by cellular licensees in their networks from being jeopardized.

Moreover, those parties calling for the repeal of the rule have failed to propose a definition of harmful interference to govern the airborne use of cellular phones, much less make any showing that such a definition of harmful interference will adequately protect the public who rely so heavily on their cellular phones and the terrestrial cellular networks on which they operate. Indeed, the terrestrial cellular licensees who have invested billions of dollars to construct and operate their networks are entitled to continue providing service free from such harmful interference, but the Comments in this proceeding filed by parties favoring repeal of 22.925 provide no assurance whatsoever that there will be any agreed upon metrics for harmful interference and contain no evidence that such metrics will show a lack of harmful interference if the Commission were to repeal the rule. As a result, it is fair to conclude that repeal of the rule would simply lead to rounds of never-ending litigation over claims and denials of harmful interference, while the public interest is up for grabs and while the terrestrial cellular networks

are jeopardized. For all of these reasons, the Commission should retain the protection against harmful interference, however defined, embodied in the bright line rule set forth in Section 22.925.

II. The Commission Should Allocate At Least 60 MHz of Dedicated, Paired Spectrum Below 6 GHz for Next Generation Air-Ground Service

In its Comments, QUALCOMM showed that to enable the provision of next generation air-ground service with sufficient capacity to meet present and expected future demand, the Commission should allocate at least 60 MHz of dedicated, paired spectrum below 6 GHz for next generation air-ground service. The other Comments filed in this proceeding do not alter this conclusion. Moreover, the other Comments do not undermine or rebut QUALCOMM's points that the existing allocation of just 4 MHz at 800 MHz is woefully insufficient and is subject to overly intrusive technical rules, which together will prevent the provision of next generation air-ground service with sufficient capacity and at affordable prices in the 4 MHz allocation.

For example, while AirCell contended that it would be a "logical licensee or user" of a restructured 800 MHz air-ground band, AirCell also argued that it is premature for the Commission to formulate new rules to govern the allocation because it recently obtained an experimental license to test digital solutions. AirCell Comments at Pgs. 10, 8. AirCell offers the Commission no proposal, much less any coherent explanation, for how broadband data and voice service with sufficient capacity for present demand and future growth and at affordable prices with just 4 MHz of spectrum.

To the extent that AirCell is planning to offer digital service with an overlay over terrestrial cellular spectrum akin to its existing analog service, the Comments filed by Verizon Wireless amply demonstrate the harmful interference that could ensue. See Comments of Verizon Wireless at Pgs. 3-9. Overlays will cause such harmful interference to licensed services

and are no substitute whatsoever for dedicated spectrum for this type of high capacity service.

Similarly, in its Comments, Motorola stated its agreement that the operational rules for air-ground service need updating to allow licensees to avail themselves of more state-of-the art technologies, while at the same time, Motorola expressed its concern that the Commission ensure that licensees in nearby allocations continue to be protected from harmful interference. Motorola Comments at Pg. 2. Motorola made no proposal at all as to how licensees could use the 4 MHz at 800 MHz to provide broadband data and voice service.

Cingular's Comments acknowledge that the Commission needs to act in light of the fact that there is only one licensee on the 800 MHz allocation, but Cingular directly avoids proposing, much less justifying, the specific action the Commission should take. See Cingular Comments at Pg. 3-4 ("There is currently only one licensee in the air-ground band authorized to serve commercial aviation, even though the rules permit the licensing of multiple licensees. Moreover, the band is subject to relatively inflexible technical rules that place significant limitations on the services that can be offered. Cingular offers no specifics about the requisite changes to the technical and operational air-ground rules.").

Finally, SITA agrees that the lack of competition in the provision of air-ground service is "a disappointing outcome," but SITA's proposed solution is to assert, without submitting a shred of evidence or data, that the Commission should authorize air carriers to allow the use of mobile telephones during flight. SITA Comments at Pg. 4. In fact, according to SITA, rather than making distinct spectrum allocations for air-to-ground use of mobile telephones, the Commission should "simply. . . take advantage of continuing technology developments and facilitate the use of terrestrial mobile telephones on board aircraft." SITA Comments at Pg. 5. SITA's complete and total speculation is no basis upon which the Commission can or should act. SITA does not

deign to submit any study or test of the potential for harmful interference if the Commission were to adopt its proposal. SITA simply assumes away the problem of harmful interference, but the Commission cannot do so.

For all of these reasons, QUALCOMM reiterates its request for an allocation of at least 60 MHz of dedicated, paired spectrum below 6 GHz for next generation air-ground service. Such an allocation would enable the provision of broadband data and voice service with sufficient capacity to meet present demand and future growth and at affordable prices, without creating any risk whatsoever of harmful interference to terrestrial wireless service.

III. The Commission Should Retain Section 22.925 to Protect Terrestrial Cellular Networks From Harmful Interference to To Their Operations on Their Licensed Spectrum

The Comments in this proceeding confirm that the Commission should retain Section 22.925, the ban on the airborne use of cellular phones, which was adopted to protect terrestrial cellular networks from harmful interference. No party to this proceeding has submitted any evidence or data that would support repeal of the rule. The absence of such evidence or data is telling. Terrestrial cellular networks need the protection against harmful interference afforded by Section 22.925. As a result, the Commission should keep the rule in place, adopt a similar rule prohibiting the airborne use of PCS phones, and review its rules to ensure that all personal electronic devices brought on airplanes do not cause harmful interference to terrestrial wireless networks operating on licensed spectrum.

The parties favoring repeal of Section 22.925 have not come close to justifying repeal of the rule. For example, AirCell concedes that "outright repeal of the rule would not be in the public interest and could jeopardize terrestrial cellular operations." AirCell Comments at Pg. 11. Nevertheless, AirCell goes on simply to assert, without submitting any evidence, because it has

conducted tests of the operation of standard cellular handsets at unspecified low, non-interfering power levels while on board an aircraft, the Commission should modify Section 22.925 "to permit the airborne use of cellular handsets so long as they are controlled in a manner that ensures against harmful interference to the terrestrial network." AirCell Comments at Pgs. 11-12. This argument fails on its face both because AirCell did not submit any data to support its claimed test results and because AirCell did not offer, much less justify, any definition of harmful interference to establish the extent of the protection that would be afforded to terrestrial cellular networks. Without the test data, the Commission and other parties cannot even begin to evaluate AirCell's claim on non-interference. AirCell's unsupported assertion of non-interference is no basis upon which the Commission can act.

Moreover, AirCell's proposal for revising Section 22.925 simply offers words, but not real protections to terrestrial cellular networks. The Commission should continue the clearly established protection against harmful interference embodied in Section 22.925, rather than opening the door to a never ending series of disputes about whether each particular phone causes interference at certain power levels when used in a plane. Indeed, there has been almost six years of litigation at the Commission and the U.S. Court of Appeals for the D.C. Circuit over whether AirCell's analog operation causes harmful interference, and this litigation is far from over. The Commission should avoid replicating this result by keeping Section 22.925 in place.

Likewise, SITA calls for the Commission to permit airlines to allow the use of mobile telephones in flight. SITA Comments at Pg. 4. SITA just assumes away the harmful interference issue as follows: "Assuming the service will be provided on a non-interference basis using cellular or PCS spectrum, such a development would also mean that some or all of the spectrum currently designated for the separate air-to-ground service could be reallocated for

other, more efficient use." SITA Comments at Pgs. 4-5. SITA provides no support of any kind for its assumption that mobile phones can be used in planes on cellular or PCS spectrum without causing harmful interference to terrestrial cellular or PCS spectrum. Of course, the Commission cannot simply assume that there will not be harmful interference.

There should be clear and convincing evidence of the absence of harmful interference, and a clear set of metrics for assessing such harmful interference, if the Commission were to consider repealing or modifying Section 22.925. SITA Comments fall far short of providing the Commission with any basis at all for repealing or modifying Section 22.925.

Finally, Cingular noted that "[c]learly, airborne cellphone use should not be permitted unless and until measures are in place to ensure that the signal from an airborne cellphone will not reach terrestrial base stations." Cingular Comments at Pg. 17. In this regard, we ask that the Commission remain open to revision of the rule in the future when technology to control interference to the terrestrial cellular network becomes available.

IV. Conclusion

For all of these reasons, QUALCOMM once again urges the Commission to allocate a substantial amount of paired, dedicated spectrum below 6 GHz to enable the provision of a new generation of high speed broadband data and voice services to airline passengers with sufficient capacity to meet present demand and future growth and at affordable prices, without any risk of harmful interference to existing services.

In addition, QUALCOMM urges the Commission to retain Section 22.925, the ban on the airborne use of cellular phones, adopt a similar rule prohibiting the airborne use of PCS phones, and review its rules to ensure that all personal electronic devices brought on airplanes do not cause harmful interference to terrestrial wireless networks operating on licensed spectrum.

Respectfully submitted,

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